

8/14

We claim:

1. A molding, that includes polyurethane, comprising:
at least one polyurethane gel; and
5 at least one polyurethane foam wherein said at least one polyurethane gel
and said at least one polyurethane foam are joined by implicit adhesive properties
during production of said molding.
2. A molding according to claim 1, wherein said molding includes an outer
10 covering layer which is impermeable.
3. A molding according to claim 1, wherein said molding includes an outer
covering layer which is impermeable to said polyurethane gel.
4. A molding according to claim 3, wherein said polyurethane foam and
15 said polyurethane gel are arranged in at least two layers, one above another.
5. A molding according to claim 4, wherein said polyurethane gel layer is
partially surrounded by said polyurethane foam.
6. A molding according to claim 1, wherein a block of said polyurethane
20 foam is at least partially surrounded by said polyurethane gel.
7. A molding according to claim 2, wherein said covering layer includes a
25 film.
8. A molding according to claim 2, wherein said covering layer includes a
polyurethane film.

9/14

9. A molding according to claim 2, wherein said covering layer includes a polyvinyl chloride film.

5 10. A molding according to claim 2, wherein said covering layer includes a leather film.

11. A molding according to claim 2, wherein said covering layer includes a micro-fiber material film.

10 12. A molding according to claim 1, wherein said molding is a seat cushion.

13. A molding according to claim 12, wherein a textile cover layer is located adjacent to said seat cushion.

15 14. A mold casting process for producing a molding that includes polyurethane, comprising the steps of:
producing a reaction mixture of polyurethane gel composition and a foamable polyurethane; and
20 joining, during foaming and curing, said reaction mixture of said polyurethane gel composition and said foamable polyurethane.

15. A process according to claim 14, wherein said reaction mixture is cast onto a covering layer.

25 16. A process according to claim 15, wherein said covering layer includes a film.

30 17. A process according to claim 14, wherein said covering layer is placed on said reaction mixture.

10/14

18. A process according to claim 14, including the steps of:
introducing a freshly produced mixture of polyol and polyisocyanate as a
gel composition into a mold lined with a covering layer;
applying a polyurethane raw material mixture to said gel composition for
5 production of foam; and
maintaining conditions for foaming and curing of said foam in said mold.
19. A process according to claim 14, including the steps of:
introducing a pre-formed gel layer into said mold wherein said mold is
10 lined with a covering layer;
applying a polyurethane raw material mixture for production of foam; and
maintaining conditions for foaming and curing of said foam.
20. A process according to claim 19, wherein said pre-formed gel layer is
15 placed on a base of said mold.
21. A process according to claim 19, wherein said pre-formed gel layer is
attached to a lid of said mold.
22. A process according to claim 14, including the steps of:
placing a pre-formed foam block in said mold;
filling said mold with a gel composition; and
maintaining reaction conditions for producing said polyurethane gel from
said gel composition.
23. A process according to claim 22, wherein said gel composition is
produced using raw materials of an isocyanate functionality and a functionality of
said polyol component of at least 5.2.

11/14

24. A process according to claim 22, wherein said gel composition is produced using raw materials of an isocyanate functionality and a functionality of said polyol component of at least 6.5.

5 25. A process according to claim 22, wherein said gel composition is produced using raw materials of an isocyanate functionality and a functionality of said polyol component of at least 7.5.

10 26. A process according to one of claims 22, wherein said polyol component for producing said gel includes a mixture of:
one or more polyols having hydroxyl numbers below 112;
one or more polyols having hydroxyl numbers in a range 112 to 600,
wherein a weight ratio of said one or more polyols having hydroxyl numbers
below 112 to said one or more polyols having hydroxyl numbers in a range 112 to
15 600 lies between 90:10 and 10:90;
a isocyanate characteristic of said reaction mixture lies in a range from 15
to 59.81; and
a product of isocyanate functionality and functionality of said polyol
component is at least 6.15.

20 27. A process according to claim 22, wherein raw materials for producing said gel include:

one or more polyisocyanates;
a first polyol component including one or more polyols having hydroxyl
25 numbers below 112;
a second polyol component that includes one or more polyols having
hydroxyl numbers in a range 112 to 600;
wherein a weight ratio of said first polyol component to said second polyol
component lies between 90:10 and 10:90, an isocyanate characteristic of said
30 reaction mixture lies in a range from 15 to 59.81, and a product of isocyanate

12/14

functionality of said first polyol component and said second polyol component is at least 6.15.

28. A process according to claim 27, further including a catalyst for said reaction between isocyanate and hydroxyl groups.

29. A process according to claim 27, further including fillers utilized with polyurethane.

30. A process according to claim 27, wherein said polyol component for producing said gel includes one or more polyols having a molecular weight between 1,000 and 12,000 and an OH number between 20 and 112, and a product of functionalities of said polyurethane-forming components is at least 5.2, and said isocyanate characteristic lies between 15 and 60.

31. A process according to claim 30, wherein isocyanates for gel production those of formula:



are used, where n represents 2 to 4 and Q denotes an aliphatic hydrocarbon radical having 8 to 18 C atoms, a cycloaliphatic hydrocarbon radical having 4 to 15 C atoms.

32. A process according to claim 30, wherein isocyanates for gel production those of formula



are used, where n represents 2 to 4 and Q denotes an aromatic hydrocarbon radical having 6 to 15 atoms.

13/14

23. A process according to claim 30, wherein isocyanates for gel production those of formula



5 are used, where n represents 2 to 4 and Q denotes an araliphatic hydrocarbon radical having 8 to 15 C atoms.

34. A process according to claim 31, wherein said isocyanates are used in pure form.

10

35. A process according to claim 31, wherein said isocyanates are used in a form of conventional isocyanate modifications.

36. A process according to claim 35, wherein said conventional isocyanate modifications include urethanisation.

15

37. A process according to claim 36, wherein said conventional isocyanate modifications include allophanisation.

20

38. A process according to claim 36, wherein said conventional isocyanate modifications include biuretisation.

Add
A1